THE EFFECTS OF PERFORMANCE MEASUREMENT SYSTEM ON EMPLOYEES' PERCEPTION AND JOB SATISFACTION

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A thesis submitted in full fulfillment of the requirements for the degree of Doctor of Philosophy (Business Administration)

Centre for Graduate Studies
Open University Malaysia

2010

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October 2010

ABSTRACT

A review of literature has indicated that employees' perception of Performance Measurement System (PMS) has not been fully understood. Such lack of understanding of the perceptual factors associated with the implementation of PMS will make a mockery out of PMS, as any PMS so designed may not be effective in influencing employees' behaviour and consequently defeat its purpose of being a form of management control system. The objective of this research is to examine employees' *perception* towards the *introduction of PMS*, and *how such perception* could affect their *job satisfaction*. A quasi-experimental design in a field setting, involving 2 manufacturing companies of equivalent characteristics, both located in Selangor Darul Ehsan, Malaysia, was carried out to compare and to test the relationship between PMS and job satisfaction, together with other perceptual variables (i.e. self-efficacy, locus of control, expectancy and valence), hypothesised to influence employees perception of PMS. Manipulation of the independent variable invoked in the quasi-experiment was the introduction of PMS into the experimental group. Data collected from the 2 groups over an interrupted time series, with one pre-test and 2 post-tests, were statistically analysed in accordance with the hypotheses set. Results of this research reveal that the introduction of PMS had positively and significantly affected employees' job satisfaction via the perceptual variables of self-efficacy, locus of control, expectancy and the value of reward; while substantiating the mediating and dynamic nature of such perceptual variables. These findings suggest that by understanding the bridge between PMS and job satisfaction via the black-box components of employee's cognitive behaviour, an effective PMS may be designed to meet the needs of employees, and this could potentially be used to explain why certain key success factors in PMS work in relation to different individuals, and at different time lag.

Keywords: Performance Measurement System (PMS), Job satisfaction, Employees' perception.

KESAN-KESAN SISTEM PENGUKURAN PRESTASI TERHADAP PERSEPSI PEKERJA DAN KEPUASAN KERJA

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Oktober 2010

ABSTRAK

Kajian semula literatur menunjukkan bahawa persepsi para pekerja terhadap Sistem Pengukuran Prestasi (SPP) masih belum dapat difahami dengan sepenuhnya. Kekurangan pemahaman sedemikan terhadap factor-faktor persepsi yang berkaitan dengan perlaksanaan SPP hanya akan memperolokkan SPP kerana reka bentuk SPP yang sebegitu asas tidak mungkin berkesan dalam mempengaruhi tingkah laku para pekerja, and seterusnya akan mengagalkan maksud kewujudannya sebagai system kawalan pengurusan. Objektif kajian ini ialah menguji persoalan *persepsi*, *oleh para pekerja*, *berikutan pengenalan SPP*, dan *bagaimana persepsi yang seumpama* boleh mempengaruhi *kepuasan kerja* para pekerja. Satu rekabentuk kuasi-eksperimen dalam persekitaran lapangan yang melibatkan 2 buah syarikat pembuatan, dengan ciri-ciri setara yang berlokasi di Selangor Darul Ehsan, Malaysia, telah dijalankan untuk tujuan membanding serta menguji hubung-kait antara SPP serta kepuasan kerja, bersama-sama dengan pembolehubah-pembolehubah tanggapan yang lain (seperti kecekapan diri, lokus kawalan, jangkaan dan valensi) yang dihipotesis dapat mempengaruhi persepsi para pekerja terhadap SPP. Manupulasi pembolehubah bebas yang digunakan dalam kuasi-eksperimen ini merupakan pengenalan SPP kepada kumpulan eksperimen. Seterusnya, berdasarkan kepada hipotesis yang ditetapkan, data yang dikumpul dari kedua-dua kumpulan tersebut sepanjang satu siri masa menyela, yang merangkumi satu pra-uji serta dua uji-lepasan, telah dianalisa secara statistik. Keputusan penyelidikan ini mengungkapkan bahawa pengenalan SPP telah mempengaruhi kepuasan kerja para perkerja secara positif, dan signifikan, melalui pembolehubah-pembolehubah seperti kecekapan diri, lokus kawalan, jangkaan dan valensi; serta mengesahkan sifat pengantaraan serta sifat dinamik pembolehubah-pembolehubah persepsi tersebut. Penemuan sebegitu mencadangkan bahawa kefahaman mengenai penghubungan di antara SPP dan kepuasan kerja melalui komponen “kotak hitam” kelakuan kognitif para pekerja, SPP yang berkesan mungkin akan dapat direka bentuk bagi memenuhi keperluan para pekerja, dan kefahaman sebegini berpotensi menjawab persoalan mengapa faktor kejayaan utama SPP tertentu mempunyai keberkesanan terhadap individu-individu yang berlainan, serta pada masa ketinggalan yang berlainan.

Kata Kunci: Sistem Pengukuran Prestasi (SPP), Kepuasan kerja, Persepsi pekerja.

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INTRODUCTION

1.1 Introduction

Research indicates that organisations using balanced Performance Measurement Systems (hereinafter referred to as "PMS") as the basis for management performed better than those that do not (Lingle and Schiemann, 1996). Consistent with such promising outcome, there is evidence of increasing usage of PMS in the United States and the United Kingdom (Bourne, 2005). However, such indication represents the tip of an ill-concealed iceberg, as the problems and difficulties associated with the implementation of PMS have yet to be fully explored.

Until recently, much of the growing literatures in the field of PMS place much of their focus on its design and implementation, but few pay attention to the problems and difficulties associated with the implementation of such PMS (Bourne, 2005). More specifically, most studies paid little attention to the cognitive link between PMS and performance behaviour, i.e. employees' cognitive behaviour arising from their perception of PMS itself. Such interpretative perspective of PMS by employees is highly relevant, because if PMS do not turn-out the way employers want them to be, it is as good as not having one.

To play its role as an effective mode of management control system, the design of any PMS shall anticipate employees' perceptions and expectations. Only when such perceptions and expectations are well understood by the measurer, an effective PMS can be designed to meet such expectations of the measured. Such concern is raised by Holloway (2000) who called for the application of the most promising theories and explanations for performance measurement experiences, and to look at performance measurement from the perspective of the measured (i.e. the employees) rather than the measurers (i.e. the performance measurement system itself). Holloway's (2000) call has been echoed by Bourguignon (2004) who suggests that behavioral management control research (e.g. via the introduction of PMS) could fruitfully be developed from the interpretative perspective of the measured, i.e. the employees themselves.

In an attempt to provide further insights into the link between the introduction of PMS and performance behaviour, this research presents an empirical research on the question of *perception, by employees*, of the *introduction of PMS*, and *how such perception could affect their job satisfaction*.

1.2 Problem Statement

What are the phenomena surrounding the implementation of PMS? In a study conducted by Marsden and Richardson (1992), it was reported that although PMS, along with its principle of relating pay to performance, is widely accepted among employees (with particular reference being made to employees of the United Kingdom's Inland Revenue), their results strongly suggests that PMS and its performance related pay as it has been operated has had, at most, only a small positive

motivational effect on employees. The same study shows that 55% of staff surveyed agreed that the performance measurement scheme had undermined morale, 62% agreed that the scheme had caused jealousies between staff, and 26% agreed that performance-pay had made staff less willing to assist one another.

In another study, Keating et al. (1999) reveals that the introduction of PMS related programme leads to worsen business performance, triggering layoffs, low employees' morale, and the collapse of commitment to continuous improvement. Evidently, McCunn (1998) reveals that 70% of PMS initiatives failed, while a later study conducted by De Waal and Counet (2009) indicates 59% of PMS initiatives still failed.

Within the Malaysian context, Jusoh et al. (2007) reported that the percentage of Malaysian manufacturing companies adopting PMS (specifically the balanced scorecard or BSC) is not overwhelming. Their study found that about 30 per cent of the companies surveyed have adopted balanced scorecard as a PMS either wholly or partially, while others have no knowledge of what BSC is all about.

What are the perceived causes of the phenomena? In order to explore the underlying cause of the above phenomena, reference is made to a very fundamental assumption made by proponents of PMS with regards to employees' perception. For instance, the statement made by Kaplan and Norton (1992, p.79), i.e. "the balanced scorecard establishes goals, but people will adopt whatever behaviors and take whatever actions are necessary to arrive at those goals", has failed to address the importance of understanding employees' perceptions of PMS, and how such perceptions are

eventually translated into actions or behaviors. Such simplified assumption could not justify the basic characteristic underlying PMS, i.e. being a strategic control system by itself.

As strategic control system, PMS must be able to influence employees' behaviors, which in turn bring about the desired business objective. Failure to comprehend employees' perceptions, which in turn bring about the consequent behaviors, would only lead to observation of unconceptualised phenomena. As correctly pointed out by Neely (2003), PMS is worth nothing unless it is being acted upon by employees, i.e. the ability of PMS to influence employees' action, which in turn delivers results.

In implementing PMS, the human element, specifically their cognitive behaviours, cannot be ignored as it is the central of PMS implementation. As Ashton (1997) observes, people issues appear to be the "make or break" factors in successful implementation of PMS. De Waal and Counet (2009) expresses concern that the behavioral aspects that influences the success of implementing and using a PMS, which is relatively less researched into, shall serves as a wake-up call for researchers to go more deeply into these problems, and to come up with solutions how practitioners can deal with them.

As performance measurement implementation involves a series of complex initiatives performed by individual employees, e.g. monitoring performance, identify areas requiring attention, motivation, communication and strengthening accountability (Waggoner et al. 1999), it is important to understand employees' perceptions towards such PMS.

In addition Hudson et al. (1999) suggests that employees involved in PMS must clearly understand the short-and long-term advantages in order to maintain their enthusiasm and commitment. If PMS is perceived as a cause of bureaucratisation and inflexible, then it will be rejected (Hvolby and Thorstenson 2000; Hussein et al. 1998; McAdam 2000).

The lack of understanding of such perceptual insight is further aggrieved with the fact that there is no absolute or objective reality in respect to how employees perceive PMS and its effects, and the only reality concerning PMS is the reality of perception from the perspective of the measured, i.e. employees themselves.

Why is it Important to Fix the Problem? The lack of understanding of how employees perceive the implementation of PMS, and subsequently how such perception will affect their job dissatisfaction, will make a mockery out of PMS design and its implementation. In turn, the PMS so designed, which is intended to be used as a management control system, will not be effective in influencing employees' behavior.

To be an effective management control system, it is important for organisations to understand the interpretative perspective to the level of the individuals, to focus on how evaluated employees view PMS, and how this view varies considerably from one individual to another in relation to certain established variables such as expectancy, self-efficacy, locus of control, and the value of reward. As pointed out by Hrebiniak and Joyce (1984), employees, being "calculative receptors", will naturally react in accordance to how they perceive the value of a strategic control system towards their

well-being. Thus, without prior understanding of employees' perception of PMS, it would be illogical to design a strategic control system that could influence the employees' behaviour.

Is the Problem of Current Interest? The lack of optimism surrounding the implementation of PMS gave way to the growing number of literatures addressing the difficulties of implementation (e.g. Meekings 1995, Bierbusse and Siesfeld 1997, Lewy and Du Mee 1998, McCunn 1998, Bourne et al. 1999, Schneiderman 1999, Bourne et al. 2000, Bourne 2005). Despite the increase in experience gained with the use of various PMS, there is still little evidence on behavioral and other intangible factors that influence the everyday use of performance management (e.g. Martins 2000; Krause 2000; and Zeppou and Sotirakou 2006).

In a study conducted to understand the institutionalisation process of PMS in a Malaysia government linked company (GLC), specifically by looking at the changes brought by the GLS transformation programme, Norhayati and Siti-Nabiha (2009) reveals that despite attempts to link the organisational activities to the system through the business operating plan, PMS-related activities have somehow been viewed as a routine mechanism for appraising employees' performance, and become decoupled from the organisational activities. Thus, the PMS so implemented did not really change the way organisational members view and do things in the organisation. The study shows that the intention to institutionalise a new practice is very much due to employees' perceptions following the implementation of PMS.

As noted by Holloway (2000), while much of the accounting-based researches conducted had their focus on how to design and implement PMS, very limited researches have addressed the issue of the underlying theoretical foundation that explain why some organisations are able to implement PMS better than others, specifically from the perspective of the measured. In general, research done to test the effect of PMS on employees' job satisfaction has provided only moderate support for its prediction. Undoubtedly, much of the failure is due to the flaws in research design.

From the above discussion, the problem statement can be viewed as the lack of understanding of how employees perceive the implementation of PMS, and subsequently how such perception will affect their job dissatisfaction will make a mockery out of PMS design and its implementation, resulting in the PMS so designed, which is intended to be used as a management control system, to be ineffective in influencing employees' behavior. In the light of the problems statement presented above, the current research aims to contribute to the existing knowledge on PMS by examining the *perceptual factor* associated with the implementation of PMS, specifically employees' perception of PMS and its influence on job satisfaction.

1.3 Research Objectives

The general objective of this research is to examining the *perceptual factor* associated with the implementation of PMS, specifically employees' perception of PMS and its influence on job satisfaction.

With the overarching research objective in mind, this research set forth the following sub-objectives:

1) To investigate the relationship between the introduction of PMS and employees' job satisfaction;
2) To investigate the effects of self-efficacy and locus of control on employees' expectancy of PMS;
3) To investigate the mediating effects of self-efficacy and locus of control between employees' expectancy of PMS and job satisfaction;
4) To investigate the mediating effects of the value of rewards between employees' expectancy of PMS and job satisfaction;
5) To investigate the mediating effects of performance-output (Expectancy II) between effort-performance (Expectancy I) and job satisfaction; and
6) To investigate the relationship between employees' demographic factors and employees' job satisfaction.

1.4 Research Questions

The problems associated with the implementation of PMS justifies the conduct of an empirical research based on the overarching question of *perception, by employees, of the introduction of PMS*, and *how such perception could affect their job satisfaction*, thus raising the following research sub-questions:

a) To what extent does the introduction of PMS affect employees' job satisfaction?
b) To what extent does self-efficacy and locus of control affect to employees'

expectancy of PMS and subsequently job satisfaction?

c) To what extent does employees' perception of PMS affect employees' job satisfaction?

d) To what extent does employees' expectancy of PMS affect employees' job satisfaction?

e) To what extend does demographic factors affect to employees' job satisfaction?

For the purpose of this research, employees' perception of PMS refers to the value of PMS rewards viewed in relation to the employees' expectancy of PMS.

1.5 Conceptualisation of Key Variables

This section defines the key variables that form the conceptual model of the current research.

1.5.1 Performance Measurement System (PMS)

The primary purpose of PMS is goal-setting. Setting a goal and developing strategies to attain such goal are proposed to affect both the commitment to reaching the goal and the level of performance. The introduction of PMS sets performance expectations between the measurer (i.e. the organisation) and the measured (i.e. employees), and provides for performance benchmarks. Well-defined benchmarks inform employees the minimum standards to meet, and when tied to rewards, will be a powerful motivation for employees.

For the purpose of this research, PMS is set upon quantitative criteria, i.e. percentage of production wastage. Such PMS that is set upon quantitative criteria distinguishes itself from the conventional subjective performance appraisals which adopt qualitative criteria, i.e. subjective measures of employees' traits, behaviours or abilities. As noted by Bourguignon (2004), the form of performance criteria, i.e. whether quantitative or qualitative, has direct impact on the evaluation judgment and consequently will influence employees' perception of PMS. This is because, with quantitative criteria, measurement comes first, and then judgment arises from the comparison of the measure with the benchmarked figure; while with qualitative criteria, judgment comes first, and measurement comes thereafter.

In so far for the employee (being the evaluated person), PMS that is associated with rewards delivers rewards, whether directly or indirectly, and whether in the form of extrinsic or intrinsic rewards. The combined form of PMS criteria, i.e. whether quantitative or qualitative, and its associated rewards, following the introduction of PMS within an organisation is expected to stimulate actions among employees, and consequently may lead to changes in processes and outcomes.

The effect of PMS on an employee's performance is described as occurring through certain cognitive process, such as the employee's expectation that a goal can probably be attained (e.g. because the employee perceives himself/herself as being self-efficacious or being in control of the outcome). This being so, clearly PMS can be a doubled-edged sword to both the measurer and the measured, e.g. PMS can produce adverse effect to employees who perceive themselves as being self-inefficacious or not being in control of the come of their actions.

1.5.2 Job Satisfaction

Job satisfaction is defined as the feelings a worker has about his or her job or job experiences in relation to previous experiences, current expectations, or available alternatives (Balzer et al., 2000). Although it is not within the scope of the current research in establishing the causal direction between job satisfaction and work performance, evidences of job satisfaction will allow for better understanding of how job satisfaction fits into the complex picture of work motivation and job-related performance arising from the introduction of PMS.

The inclusion of job satisfaction as a variable in this research provides a useful clue to management in evaluating organisational effectiveness following the introduction of PMS. For example, with the introduction of PMS comes PMS-related rewards, and suppose that such rewards are being perceived by employees as being valuable to them, thus increasing their intention to stay on the job, and follow by an enhanced commitment to achieve the organisation's overall goals. Such increased level of job satisfaction would thus provide good evidence that progress within the organisation is happening, following the introduction of PMS.

For the purpose of this research, the concept of "overall" satisfaction shall be used in lieu of "facet" satisfactions. Although it is acknowledged that job satisfaction is not a unitary concept, where it consists of various different facets, such as the job itself, pay, co-workers, supervisors, and promotion prospect, the concept of "overall" job proves to be more relevant for the following reasons (Balzer et al., 2000), *inter alia*, firstly, an individual's job satisfaction is not only limited to the 5 facets alone, i.e. job,

pay, co-workers, supervisors and promotion. There are also other aspects of satisfaction associated with the job, e.g. satisfaction with clients, job training, or other benefits. Thus, "facet" satisfaction may not cover all areas an employee considers when evaluating his/her overall satisfaction.

Secondly, time perspective may differ between facet and overall satisfaction. Responses to items in a facet satisfaction, e.g. about the job, may have at least two different frames of reference, and as such yield different outcome as to the level of satisfaction over different times. The frame of reference for answering facet satisfaction seems to be primarily short-term, while the frame of reference for the overall satisfaction may be longer term.

Based on the above reasons, the "overall" satisfaction is preferred over the "facet" satisfaction, as this research intends to reflect not only the five principal facets and the importance of each to the individual, but also their interactions and the contributions of other long-term situational and individual factors that make a person satisfied or dissatisfied with the job.

1.5.3 Perception of PMS

It is important to note that the perceptual aspect of PMS undertaken in the current research is purely interpretative in nature, i.e. that PMS is as relevant as perceived by the individual employee. In another word, "reality" exists only in the form of "representations". As the level of satisfaction for specific behaviour is predictable by the individual's expectations of the probable outcomes resulting from the individual's

actions (known a expectancy) and the subjective desirability of these outcomes (known as valence); and recognising the diversity of employees' perceptions, for the purpose of this research, employees' perception of PMS refers to the value of PMS rewards viewed in relation to the employees' expectancy of PMS.

First, *employees' perception of the value of PMS reward* is known as "valence" within the expectancy theory. It measures the degree to which an employee values a particular reward that is provided. The higher the valence, the more motivated an employee will be. Because individuals choose behaviour based on the outcome they expect and the value they tag to those outcomes, employees' willingness to respond in relation to PMS implementation is dependent on the attractiveness of rewards associated to the outcomes.

Second, *employees' expectancy of PMS* refers to the following two components, i.e. i) employee's perception that performance is related to effort, and ii) employee's perception that reward is consequential to performance.

As for the first component of perception, this "effort-performance" factor is the "expectancy" component of expectancy theory, where it posits that the higher the "effort-performance" expectancy, the more motivated an employee will be in exerting his/her effort. Vroom (1974) defines the "effort-performance" component as the subjective probability that effort will lead to performance.

As for the second component of perception, this "performance-outcome" factor is the "instrumentality" of expectancy theory, where it posits that an employee's expectation

that his/her reward is closely associated to his/her level of performance, and is positively correlated between motivation and effort.

1.5.4 Self-Efficacy

Self-efficacy refers to an individual's belief in his/her capability to organize and execute a course of action needed to meet the demands of a situation (Bandura, 1977). People who perceive themselves as efficacious are confident about their capabilities in handling the job, and they do not overestimate the difficulties associated with the job. As described by Luszczynska, et al. (2005), persons with high self-efficacy choose to perform more challenging tasks, and set themselves higher goals and stick to them; their actions are pre-shaped in thought, and once an action has been taken, highly self-efficacious people invest more effort and persist longer than those low in self-efficacy; when setbacks occur, they recover more quickly and remain committed to their goals; they select challenging settings and explore their environment or create new ones, thus represents a belief in one's competence in dealing with all kinds of demands.

The variable self-efficacy is included in this research as it relates to emotions, such as job satisfaction. For example, the introduction of PMS would cause an employee to evaluate their own self-efficacy, and a low sense of self-efficacy is associated with negative emotions and helplessness, thus rendering the employee to have a low expectancy of the successful performance of the given job. Subsequently, employees who are burdened with a belief of low self-inefficacy suffer distress and negative emotions, such as anxiety and depression (Bandura, 1997; Schwarzer, 1995); while

those who are high in self-efficacy are more successful in solving conceptual problems at work, thus enhancing job satisfaction (Bandura, 1997).

1.5.5 Work Locus of Control

Locus of control refers to the general manner in which an individual perceives contingencies between his/her own efforts and outcomes. The term "internal" is used to describe a person who believes he/she has some control over the outcomes of his/her effort (known as internal locus of control). Whereas, the term "external" is used to describe a person who believes the outcomes of his/her efforts are controlled by factors beyond himself/herself (known as external locus of control).

Although the term "locus of control" is often referred to as expectancies of life in general rather than to the contingencies of any specific situations (based on Rotter's (1966) works), for the purpose of this research Spector's (1988) "work locus of control" will be used to specify concerns within the work domain. According to Spector (1988), the "work locus of control" may predict work behaviour more precisely that Rotter's (1966) general scale.

Work locus of control is used as a variable in this research as it has been found to correlate significantly with job satisfaction, intention of quitting, perceived influence at work, role stress and perceptions of supervisory style (Spector, 1988), and is relevant to the conceptual framework of this research.

1.6 Organisation of Thesis

This research is organised in the following order:

Chapter 2 discusses prior literatures relevant to the proposed empirical model, specifically the evolution of PMS and the interrelationships between key variables included in this research, i.e. PMS, job satisfaction, expectancy, locus of control, self-efficacy and value of rewards.

Chapter 3 presents the empirical model, underlying theories relevant to the proposed empirical model, and thereupon deriving specific hypotheses.

Chapter 4 outlines the research methodology, specifying the necessary experimental design and procedures, operationalisations of the variables, and initial procedures for data analysis.

Chapter 5 discusses the statistical analysis and the corresponding findings.

Chapter 6 concludes the research by summarising and discussing the results and their contributions toward the development of the theory and practices in the field of PMS.

1.7 Summary

In summary, this chapter provided an introductory overview of the research under consideration. The significance of the problem and its underlying causes are

presented, leading to a statement of the problem. From the problem statement, specific research questions and research objectives are identified and presented. Assumptions and definitions of key variables used in the current research are included. This chapter ends with how the research was organised.

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